

Appl. No.: 08/908,994
Amdt. Dated: 07/06/2009
Off. Act. Dated: 04/07/2009

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested in view of the foregoing amendments and discussion presented herein.

1. Rejection of Claim 2 under 35 U.S.C. § 101.

Claim 2 was rejected under 35 U.S.C. § 101, as being considered by the Examiner to be directed to non-statutory subject matter, for not being tied to a particular machine or apparatus.

In response, the Applicant has amended Claim 2 to tie the described steps with an apparatus. In particular, the encrypting of the data is recited as being “*within an enciphering unit*”.

Therefore, the Applicant respectfully submits that the above claims are now cast in proper form under 35 U.S.C. § 101.

2. Rejection of Claims 12-13 under 35 U.S.C. § 112, second paragraph.

Claims 12-13 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular the phrases “*said interfaces*” and “*said switch*” are objected to for lacking proper antecedent basis.

Claim 1 has been amended to recite a first and second interface device is “*at a first interface*”, and that the receiver device is “*at a second interface*”, which provides proper antecedent basis for “*said interfaces*” in Claims 12 and 14.

Claim 13 has been amended to recite the coupling of a communications switch between the first and second interfaces, and thus provides antecedent basis for “*said switch*” recited in Claim 13.

Therefore, in view of the above, the Applicant respectfully submits that Claims 12-13 are cast in proper form under 35 U.S.C. § 112.

3. Rejection of Claims 1-3, 10, and 12-13 under 35 U.S.C. § 102(b).

Claims 1-3, 10, and 12-13 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kaufman (U.S. Pat. No. 5,491,752). Claims 1, 2 and 3 are independent.

(a) **Claim 1.** Claim 1 is directed to a system for e secure exchange of data between a sender device and a receiver device over the public-switched telephone network (PSTN). Claim 1, particularly as amended, recites a number of elements that distinguish the claimed invention over the cited Kaufman reference.

To appreciate the differences between Claim 1 and Kaufman, first consider the teachings of Kaufman. Kaufman teaches a system which increases the “*difficulty of password guessing*” as recited in the title of the patent. This is also echoed throughout the Kaufman reference. The Abstract of Kaufman states “*the user provides a workstation with a ‘password’, and a ‘token’ obtained from a passive authentication token generator.*” It will be appreciated that the user in Kaufman is accessing a workstation coupled to a mainframe computer (server), such as a VAX 6000 as recited in the examples of Kaufman, and discussed in column 9 therein. Accordingly, the network is a private network which restricts unauthorized users from even accessing the network. In addition, as taught in column 8, line 66 through column 9, line 9 of Kaufman; when the identity of the user is verified then the system provides that user with “*a ‘ticket’ that is useful in ‘logging in’ to a desired computing system” ...“for a selected time period.”*

The above aspects of Kaufman are in direct contradistinction to that which is recited in Applicant's Claim 1. The above aspects demonstrate that the basic objects and operating principles of Kaufman are completely different from the present invention which, for example, provides for secure communication between the sender and receiver, and not simply a mechanism for logging the user onto a mainframe. The present invention does not provide “*tickets*” which allow the user to access the mainframe system for a selected period of time. The secure communication between sender and receiver can even be secure from the server. Note that Claim 1 recites routing the encrypted data from a sender to a receiver “*without routing through said server.*”

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Claim 1 recites the authentication of both the sender and the recipient (receiver). The server links the sender and receiver, yet without routing the data through the server once the sender and receiver are authenticated as recited in the second to the last element of the original claim. The above aspects are not anticipated by the Kaufman reference.

In addition, Claim 1 pertains more particularly, to securing the communication between sender and receiver over the public switched telephone network (PSTN), which starkly differs from the Kaufman reference. It will be recognized that anyone has access to the PSTN, whereby securing transmissions between sender and receiver are all that much more problematic; ...yet these problems are solved by Applicant's invention.

Claim 1 teaches security on a public network, specifically the PSTN which is distinct from Kaufman. Applicant claim also recites "*verifying the authenticity of said receiver device*" as it establishes a connection between the sender and receiver. In addition, Claim 1 recites "*securely exchanging data over the PSTN as a single call connection from the sender through the PSTN in response to authentication of both said sender device and said receiver device*". Still further, Claim 1 recites creating a record for billing of the communications service performed over the PSTN by said system. None of these aspects are taught by the Kaufman reference, while numerous additional aspects and interrelationships are recited in the claim which are not taught by the relied-upon Kaufman reference.

An anticipation rejection requires that every claim element must be taught or inherent in a single prior art reference - Manual of Patent Examining Procedure (MPEP) §706.02a. It is clear that Claim 1 recites one or more elements not found in Kaufman and, therefore, is not anticipated by that reference.

Therefore, the Applicant respectfully requests that the rejection of Claim 1, and the claims that depend therefrom, be withdrawn.

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(b) Claim 2. Claim 2 is directed to a method for securely exchanging data between a sender modem and a receiver modem over the public-switched telephone network (PSTN).

Claim 2 contains similar elements as recited in Claim 1 discussed above. As discussed in relation to Claim 1, the present invention is directed at different objects and operating principles than are found in the Kaufman reference, and provides a number of steps and interrelationships which are not taught by that reference.

Claim 2 of the instant application is directed to a method of secure communication between the sender modem and receiver modem over the PSTN and is not simply a mechanism for logging the user onto a mainframe, or providing “tickets” which allow the user to mainframe system access for a selected period of time. Claim 2 recites the secure communication between sender and receiver modems over the PSTN, and even provides security from the server itself, as Claim 2 recites “*exchanging of encryption keys within a handshaking process between said sender modem and said receiver modem*” prior to communicating of data between sender and receiver modems.

More specifically, Kaufman does not teach secure communications over a public PSTN network, nor does it discuss the specifics of “*verifying authenticity of said sender modem*”, or of connecting “*with said receiver modem as identified within said first transmission of said sender modem.*” Kaufman also lacks any teaching of “*verifying the authenticity of said receiver modem.*” Still further, Kaufman lacks teaching of “*transferring the connection over the PSTN from said sender modem to said receiver modem.*” Numerous additional aspects and interrelationships are recited in the claim which are not taught by the relied-upon Kaufman reference.

Consequently, the Kaufman reference does not anticipate Claim 2, since support for an anticipation rejection requires that every claim element must be taught or inherent in a single prior art reference - Manual of Patent Examining Procedure (MPEP) §706.02a. Such is not the case with regard to Claim 2.

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Therefore, Applicant respectfully requests that the rejection of Claim 2, and the claims that depend therefrom, be withdrawn, and the instant application allowed to issue.

(c) Claim 3. Claim 3 is directed to an apparatus for securely exchanging selected data over a public switched telephone network (PSTN). Claim 3 was rejected for the same reasons as Claims 1 and 2.

The Applicant has amended Claim 3 for purposes of clarification as well as to incorporate elements recited in Claims 1 and 2 that distinguish over Kaufman as discussed above.

As discussed above in relation to Claims 1 and 2, the present invention is directed to different objects and operating principles than are found in the Kaufman reference, and the structures for accomplishing these objectives are similarly different. Unlike the Kaufman reference, the invention as recited in Claim 2 is not directed to increasing the *"difficulty of password guessing"* as recited in the title of the Kaufman invention, nor directed to providing *"tickets"* which allow the user to access the mainframe system for a selected period of time.

In contrast to Kaufman, the present invention provides structures and interoperation to support secure communication between the sender and receiver over the PSTN. Claim 3 teaches secure communications over a public PSTN network, and of controlling *"a telephony switch"*, to which is coupled a *"telephony server"*, of which Kaufman is silent. There is nothing in Kaufman directed at a telephone server performing *"authenticating the sender"*, or of *"decrypting the sender authentication and receiver identification information"*. And of course, Kaufman does not teach the aspects of *"transferring the connection from the sender to said recipient to allow the sender and the recipient to exchange selected data which has been encrypted for transfer over the PSTN through said telephony switch."* Numerous additional aspects and interrelationships are recited in the claim which are not taught by the relied-upon Kaufman reference.

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Consequently, the Kaufman reference does not anticipate Claim 3, since support for an anticipation rejection requires that every claim element must be taught or inherent in a single prior art reference - Manual of Patent Examining Procedure (MPEP) §706.02a.

Therefore, Applicant respectfully requests that the rejection of Claim 3, and the claims that depend therefrom, be withdrawn, and the instant application allowed to issue.

4. Claims 1-20 are nonobvious.

Claims 4-8, 11 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaufman (U.S. Pat. No. 5,491,752) in view of Baratz (U.S. Pat. No. 5,742,596) and further in view of Anderson (U.S. Pat. No. 5,283,829).

Neither the subject matter of the rejected claims nor the subject matter of Claims 1-20 would be obvious to a person having ordinary skill in the art in view of Kaufman, Baratz, or Anderson whether considered separately or in combination with one another and what is known to one of ordinary skill in the art. These references cited by the Examiner, and their combination thereof, neither suggest, teach, nor otherwise provide motivation or incentive for the system of securely communicating between a sender and receiver over the PSTN. The references do not provide teachings about the authentication of sender and receiver when routing a telephone call on the PSTN, nor do they teach about the transferring of the call to the recipient. There are numerous additional aspects recited in the amended claims which are not taught by these references whether considered separately, or considered in combination with one another and what is known in the art.

Therefore, the combination of references do not correspond to that described in the Applicant's claims, whereby the rejection of Claims 1-3, 10 and 12-13 should be withdrawn.

Therefore, Applicant respectfully requests that the rejection of the above claims be withdrawn and the instant application allowed to issue.

5. Amendment of Claims 1-14.

Claims 1-3. Independent Claims 1-3 have been amended to recite the invention with more particularity. Each of these claims has been amended to include the material of dependent Claim 4 reciting the public switched telephone network (PSTN). In addition, the creation of a billing record is recited in each claim as was recited within dependent Claim 7.

Claim 1 has been amended to recite that the sender device is “*at a first network interface*”, and that the receiver device is “*at a second network interface*”, which provides proper antecedent basis for Claims 12-14. Support for this is found in the specification, including page 4, lines 4-5. Claim 1 also recites that the call from the sender device is to a “*telephony server known to the sender device.*” It will be seen in page 8, lines 8-11; page 10, lines 1-4, that a call is initiated from the sender through the modem to the telephone server, and in this example the modem is limited to calling this single telephone number, which of course would need to be known by the sender device. The claim recites “*establishing a connection over the PSTN from said sender device, which has been authenticated, to said receiver device, which has also been authenticated*”, which substantially summarizes the result of the process, while being recited in the Abstract of the invention as well as throughout the specification. The “*creating of a record for billing*” is included in Claim 1, similar to that recited in original Claims 7-9. To reduce any confusion about call origination, the call from the server to the recipient is relabeled as an “*authentication transmission*”, wherein the second transmission from the sender is more appropriately labeled as “*a second transmission*” from the sender. The summary section of the specification on page 6 through 7 describes the first and second transmissions from the sender device. Claim 1 also recites that said system “*is configured for securely exchanging data over the PSTN as a single call connection from the sender through the PSTN in response to authentication of both said sender device and said receiver device.*” Support for the “*single call connection from the sender through the PSTN*”, can be seen from FIG. 4 where the

single call from the sender, originated by “*detect ring*” at block 275, is transferred in block 330 to the recipient, whereby a single call is clearly shown. The transfer is also discussed in the specification, including page 10, lines 33-35.

Claim 2 has been amended in similar ways as independent Claim 1. A step of “*exchanging encryption keys within a handshaking process*” is recited in Claim 2, support for which is found in the drawings and specification, including page 10, lines 36-37.

Claim 3 has been amended to recite similar aspects as recited within independent Claims 1-2. However, the elements in claim 3 are recited in relation to the “*telephony server*” which is shown in FIG. 1 and recited throughout the specification.

Claims 4-14. The preamble form of each of these claims has been amended according to current office practice as “*A system/apparatus/method as recited in claim X, wherein/further comprising*”.

Claim 4. Dependent Claim 4 has also been amended to recite the connection between sender and receiver being established in response to “*a handshaking process and then communicate encrypted data from sender to receiver, and/or from receiver to sender*”, support for which is found in the specification, including page 10, line 36 through page 11, line 4, and has already been discussed in relation to the amendment of Claim 2.

Claim 5. Dependent Claim 5 has been amended to recite a specific embodiment of the recipient identification, in particular “*comprises the account number of said recipient as known to the telephony server*”, support for which is found in the specification, including page 10, lines 5-10.

Claim 6. Dependent Claim 6 has been amended to recite “*said telephony server is disconnected from the call in response to said telephony server establishing said communication link between said sender device and said receiver device.*” Support for this aspect is found in the specification, including page 8, lines 22-25; and page 7, lines 5-7.

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Claim 7. Dependent Claim 7 has been amended to recite particulars of the record of billing as being on a “*per-call and/or per-minute basis*”, as recited in the specification, including page 7, lines 1-4; and page 15, lines 35-37.

Claims 8-10 and 14. Dependent Claims 8-10 and 14 have been amended to provide a proper antecedent with amended parent Claim 1.

Claim 9. Dependent Claim 9 has been amended to recite the record for billing as “*configured for obtaining*” payment from said user by an electronic payment transaction, toward improving readability.

Claim 10. Dependent Claim 10 has been amended to recite structural and interrelational specifics about how the anonymity of the sender and receiver is achieved, as recited in the original claim form. The call from the sender to telephony server is recited in many places in the specification, including page 5, lines 20-25, while ability to route the call to the recipient “*without communicating the telephone number of the receiver over the PSTN*” is taught in the specification, including Page 10, lines 1-4.

Claim 11. Dependent Claim 11 has been amended to recite a “*secure modem device (SMD)*” as the sender and receiver devices, and its ability for following a cryptographic protocol in cooperation with said telephony server. Support for this aspect is found in the specification, including page 5, lines 21-24; and page 6, lines 5-9.

Claim 12. Dependent Claim 12 has been amended to recite one configuration of the sender device which “*limits it to calling out only to said telephony server*”, as supported by the specification, including page 8, lines 8-11; and page 10, lines 1-2.

Claim 13. Dependent Claim 13 has been amended to depend from Claim 1, and to recite elements which provide proper antecedents for the first and second interfaces, the telephony switch, and the digital modems as recited in original Claim 13.

Claim 14. Dependent Claim 14 has been amended to recite that the interfaces may comprise either “*ISDN or ADSL*” or the T1 connections as originally recited. ISDN and ADSL are taught in the specification, such as on page 3, lines 10-13, and page 8, lines 4-8. It should be kept in mind that the present invention can be practiced on

“*virtually any telephony system wherein a network connection exists*”, as recited in the specification on page 2, lines 29-32.

6. New Claims 15-20.

The Applicant has added dependent Claims 15-20 to bring the total claims up to the number covered by the basic filing fee while reciting additional aspects from the specification to be considered.

Claim 15. Dependent Claim 15 has been added to recite that “*a valid account on said telephony server must be established by said sender device as a condition for verification of authenticity.*” Support for this aspect is found in the specification, including page 9, lines 14-18; and page 10, lines 24-35.

Claim 16. Dependent Claim 16 has been added to recite that “*a computer coupled to said sender device for selecting data information, and for selecting a recipient for said selected data to be sent to.*” Support for this aspect is found in the drawings shown in FIG. 1, and in the specification, including page 9, lines 8-25; and page 10, lines 5-23. Additionally, Claim 16 has been amended to recite that “*a computer coupled to said receiver device for controlling the receipt of selected data from said sender device.*” Support for this aspect is found in the drawings shown in FIG. 1, and in the specification, including page 11, lines 5-31.

Claim 17. Dependent Claim 17 has been added to recite “*wherein said record for billing is provided to a local exchange carrier, or local telephone service provider, which incorporates the billing into a conventional phone bill for payment by a customer.*” Support for this aspect is found in the specification, including page 8, line 31, page 10, lines 14, 17 and 33; and page 15, line 35.

Claim 18. Dependent Claim 18 has been added to recite that “*an operator interface configured to allow a sender to select the data which is to be transferred and to select a recipient.*” Support for “*operator interface*” is found in the specification, including page 9, lines 1-2; while “*to allow a sender to select the data which is to be transferred*” is found in the specification, including page 9, lines 26-30.

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Claim 19. Dependent Claim 19 has been added to recite that “*said first transmission is executed in response to aggregation, compression and encryption of data selected by a sender for said sending device, and the selection of an authorized recipient.*” Support for “*aggregation, compression and encryption*” taught on page 9, line 36 through page 10, lines 36-37 of the specification, while “*selecting data to the transferred*”; and “*authorized recipient*” are taught on page 9, lines 14-17 and 24-25.

Claim 20. Dependent Claim 20 has been added to recite that “*said telephony server caching said encrypted selected data from said sender device for forwarding to the receiver device at a later time.*” Support for this is found in the specification, including page 16, lines 3-5.

7. Amendments Made Without Prejudice or Estoppel.

Notwithstanding the amendments made and accompanying traversing remarks provided above, Applicant has made these amendments in order to expedite allowance of the currently pending subject matter. However, Applicant does not acquiesce in the original grounds for rejection with respect to the original form of these claims. These amendments have been made without any prejudice, waiver, or estoppel, and without forfeiture or dedication to the public, with respect to the original subject matter of the claims as originally filed or in their form immediately preceding these amendments. Applicant reserves the right to pursue the original scope of these claims in the future, such as through continuation practice, for example.

8. Conclusion.

Based on the foregoing, Applicant respectfully requests that the various grounds for rejection in the Office Action be reconsidered and withdrawn with respect to the presently amended form of the claims, and that a Notice of Allowance be issued for the present application to pass to issuance.

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In the event any further matters remain at issue with respect to the present application, Applicant respectfully requests that the Examiner please contact the undersigned below at the telephone number indicated in order to discuss such matter prior to the next action on the merits of this application.

Date: _____

Respectfully submitted,

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